

## ABSTRACT OF THE DISCLOSURE

A method and system for profiling network flows at a measurement point within a computer network is provided. The method includes measuring network flows having invariant features at a measurement point located within routing infrastructure of the computer network to obtain flow statistics. The method also includes aggregating the flow statistics to obtain a traffic profile of the network flows at the measurement point. The method and system utilize the natural hierarchy in the Internet addressing scheme to provide a means for making tractable measurements of network traffic in high-speed networks. Moreover, the method and system adapt dynamically to the changing underlying traffic characteristics to maintain a maximum memory footprint for the profiles. The method and system adapt by adjusting the level of aggregation of the traffic endpoints along a scale from Interface to fully specified network address.